

MARKED-UP VERSION OF AMENDMENTS:

Specification Amendments Under 37 C.F.R. § 1.121(b)(1)(iii)

Please replace the paragraphs as indicated below with the following replacement paragraphs, which are marked up by way of bracketing and underlining to show the changes relative to the previous version of the paragraph:

Please replace the paragraph at page 27, lines 13 through 31, with the following paragraph:

The foregoing data show that simple incubation conditions promote hybrid formation between the p190 mRNA target and the hAS190 structured antisense. The specificity of this association is tested by preparing *in vitro* transcripts corresponding to fragments of p210 *BCR-ABL*, *ABL* and *BCR* mRNAs (n2), all of which share some sequence with the sense strand of p190 *BCR-ABL* (the p210 form of *BCR-ABL* having identical *ABL* but different *BCR* sequences and thus has a distinct junctional sequence). These RNAs are used in 37°C hybridisation reactions, in conditions of large antisense excess, with either the hAS190α or hAS210 (a structured antisense which is designed to bind the p210 *BCR-ABL*). 2 pmol <sup>32</sup>P-labeled hAS190α or hAS210 (The sequence of the hAS210 RNA is: 5'-GGGCGAAUUGGAUUCGCCCCGGGCUUUUGAACUCUGCUU

AAAUCCAGUGGCUGAGUGGAUCUUCCACUUAGCUACUGGACUUAAG UAGUGUUCAUGCAUCUAG-3'; SEQ ID NO: 1) is mixed with 0.2 pmol of the indicated unlabelled target RNA species as described in Example 2 and allowed to associate at 37°C in reaction buffer as indicated in the foregoing example for general RNA reactions. Reactions are stopped by the addition of formamide loading buffer and kept on ice until they are loaded onto a 5% polyacrylamide gel containing 4M urea. The gel is run at 10V/cm, fixed, dried and exposed to film for

1 hour. mRNA fragments are designated p190(+), p210(+), ABL(+), BCR(+) and an opposite (antisense) fragment is designated p190(-).

Please replace the paragraph at page 28, lines 13 through 27, with the following paragraph:

A model for the nucleation-unwinding and hybrid formation is shown in Fig. 1C. Experimental data supporting the proposed model are obtained by blocking experiments carried out with oligonucleotides complementary to three regions of the hAS190 $\alpha$  antisense molecule (shown in Fig. 4B). Blocking oligonucleotides are 15- or 16-mers with similar predicted T<sub>m</sub> (48-50°C). The sequences are: oligo 1 5'AGACGCA GAAGCCCG (SEQ ID NO: 2); oligo 2 5'GTAGAACGATGGCGAG (SEQ ID NO: 3); oligo 3 5'GGCGCCTTCCA TGGA (SEQ ID NO: 4). <sup>32</sup>P-labeled hAS190 $\alpha$  (1 pmol) is mixed with the indicated concentration of oligonucleotide in reaction buffer (as described in Example 2) and incubated at room temperature for 2 min. Unlabelled mRNA fragment p190(+) RNA (1 pmol) is then added and the reaction incubated at 37°C for 30 min. The reactions are run on a 5% native polyacrylamide gel prior to autoradiography. Only oligo 1, which is complementary to the targeting region of hAS190 $\alpha$ , suppresses the interaction of hAS190 $\alpha$  with its p190(+) target (Fig. 4A). Oligonucleotides 2 and 3, the latter including the region at the apex of stem loop II, did not inhibit hybrid formation. Thus the initial hybridisation does seem to occur at the base of stem/loop II.

Please replace the paragraph at page 3, lines 4 through 11, with the following paragraph:

A. The intended structure of the hAS series of RNAs: A diagram of the hAS190 $\alpha$  form is shown. Antisense residues are shown in black (bold line), structural residues in greyscale or black (thin line). The targeting region (boxed) is a single stranded region between stem loops I and II. The antisense molecule is drawn 5'→3'. The relationship of the targeting loop to the BCR-ABL mRNA (SEQ ID NO: 7) is shown. The two forms of the hAS190 molecule, designated  $\alpha$  (SEQ ID NO: 5) and  $\beta$  (SEQ ID NO: 6), differ only

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in the descending strand of stem/loop II and the differences present in the loop of hAS190 $\beta$  form are shown in brackets.